

REMARKS

This application, as amended herein, contains claims 1-25.

The Examiner objected to the amendment filed on July 14, 2005 as introducing new matter. The objection is traversed because the amendments were made specifically to respond to the Examiner's objection to the drawings under 37 C.F.R. 1.83(a), and the Examiner's claim rejection under 35 U.S.C. 112, second paragraph, that the subject matter of claims 6-13 and 15 was indefinite, as not shown in the drawings.

Since this subject matter was clearly in the claims, which the Examiner has admitted in making the objection, it is perfectly proper to amend the drawings and the specification to conform.

Specifically, the MPEP provides:

2163.06 Relationship of Written Description Requirement to New Matter

Lack of written description is an issue that generally arises with respect to the subject matter of a claim. If an applicant amends or attempts to amend the abstract, specification or drawings of an application, an issue of new matter will arise if the content of the amendment is not described in the application as filed. **Stated another way, information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter (emphasis added).**

III. CLAIMED SUBJECT MATTER NOT DISCLOSED IN REMAINDER OF SPECIFICATION

The claims as filed in the original specification are part of the disclosure and therefore, if an application as originally filed contains a claim disclosing material not disclosed in the remainder of the specification, the applicant may amend the specification to include the claimed subject matter. *In re Benno*, 768 F.2d 1340, 226 USPQ 683 (Fed. Cir. 1985). Form Paragraph 7.44 may be used where originally claimed subject matter lacks proper antecedent basis in the specification. See MPEP § 608.01(o). (emphasis added)

Thus, it is respectfully submitted that no new matter has been added. However, if the Examiner believes some slight adjustment in the wording of the amendment would be helpful, the undersigned would greatly appreciate a telephone call from the Examiner to discuss such changes.

As stated in the Office Action of August 31, 2005, Claims 6-13, 15, and 22 were rejected as anticipated by Omori. Claims 6-13, 15 and 22 were rejected as obvious over Omori. Claims 17 and 18 were rejected as obvious over Omori in view of Kondou et al. Finally, claims 19-21 were rejected as obvious over Omori in view of McKeen et al. For the following reasons, these rejections are respectfully traversed. There is no detailed rejection stated for claims 1-5, 14 and 16.

Independent claim 1 had been amended to recite:
"the cross sectional area of each plenum being substantially matched to local volumetric flow rate, whereby pressure drop of fluid flowing in the plenums is reduced." Neither Omori, nor any of the other prior art of

record teaches or suggests this approach. Support for this amendment may be found in the paragraph bridging pages 10 and 11 of the specification.

By matching the cross sectional area to the required local volumetric flow rate, several important advantages are produced. These advantages were pointed out in the amendment filed on July 14, 2005, and will not be repeated herein. However, it is pointed out that this amendment is not a mere functional limitation. It deals specifically with the manner in which the air flow is controlled to produce real results in terms of a drop in pressure differential needed to produce a given air flow. Thus, this recitation should be duly considered by the Examiner.

Claim 1 has been further amended to recite that:

the heat producing devices are chips, the chips being on circuit cards, the cards being in a horizontal plane so that said fluid cooling medium flows between said circuit cards from a first plenum to a second plenum.

Support for this amendment may be found in the specification on page 15, lines 6-8, and in Fig. 3A of the drawings.

The arrangement recited in claim 1 provides specific structural distinctions from the cited prior art which takes advantage of the allegedly functional recitation introduced by the previous amendment. Specifically, the volume flow of air or coolant in the plenums is

specifically matched to position along the plenum, and this flow is directed between the parallel, horizontal circuit boards. This arrangement is not shown or suggested in the prior art.

Omori does not teach or suggest Applicant's invention, as set forth in claim 1. At best Omori is directed principally to separating cooling air for racks of printed circuit boards, the vertical boards being of "high caloric value" and the horizontal boards being of "low caloric value". There is little said with respect to Figs. 6 and 7 which Omori alleges to be prior art. Specifically, it is submitted that there is no teaching or suggestion of the cross sectional area of each plenum being substantially matched to local volumetric flow rate, whereby pressure drop of fluid flowing in the plenums is reduced, as recited in claim 1. Further, there is no teaching or suggestion in Omori of the cards being in a horizontal plane so that the fluid cooling medium flows between the circuit cards from a first plenum to a second plenum. In fact, Omori teaches away from the invention, as the cards are arranged to block flow, and not to allow flow from a first plenum to a second plenum through spaces between parallel, horizontal cards. Finally, there is no teaching or suggestion of the many advantages that result from this arrangement, as also specifically recited in claim 1. Thus, it is respectfully submitted that claim 1 is directed to patentable subject matter.

Claims 24 and 25 have been amended in a manner analogous to claim 1. Thus, it is respectfully submitted

that claims 24 and 25 are also directed to patentable subject matter.

The remaining claims depend from independent claim 1. These claims have further recitations, which in combination with the recitations of claim 1, are not shown or suggested in the art of record.

With specific reference to claims 17 and 18, it is respectfully submitted that the curved elements in the figures of Kondou et al. referred to by the Examiner are not in fact partitions. In Fig. 12, item 24 is a large propeller (column 9, line 40). In Figs. 16, item 5 is a slit plate or plates which depend into the flowing fluid and essentially act as heat sinks (column 10, lines 12-20). In Fig. 19, item 5 guides cooling air (column 10, lines 32-42). Finally, in Fig. 32, item 18 is a wing-shaped slit plate (column 12, line 54). These structures either move air or direct its flow. They are in no way partitions to the flow of cooling air. Thus, it is submitted that claims 17 and 18 are also directed to patentable subject matter.

It is respectfully submitted that the combination of Omori and McKeen et al. does not render claims 19-21 obvious. There is very important advantage to the structure of claims 19-22 (as well as to that of claims 17 and 18 discussed above) in that the resulting convexity of the partition prevents undue restriction of the exhaust flow from the lowest portions or the plenum, which could cause some resistance to flow produced by the fans 62 in the lowest position (see specification, paragraph bridging

pages 20 and 21, and explanation in the following paragraph on page 21). Neither Omori nor McKeen, whether taken alone or in combination, teach or suggest Applicant's invention, nor have any appreciation for the advantages of Applicant's invention, as specifically disclosed in the specification. It is thus submitted that all of these claims are also directed to patentable subject matter.

Reconsideration and allowance are respectfully requested. A check for \$120 to cover the fee for a one-month extension of time in which to respond to the Office Action is enclosed herewith.

Respectfully submitted,

David Aker

David Aker, Reg. No. 29,277
23 Southern Road
Hartsdale, NY 10530

1/3/06

Date

Tel. & Fax 914 674-1094